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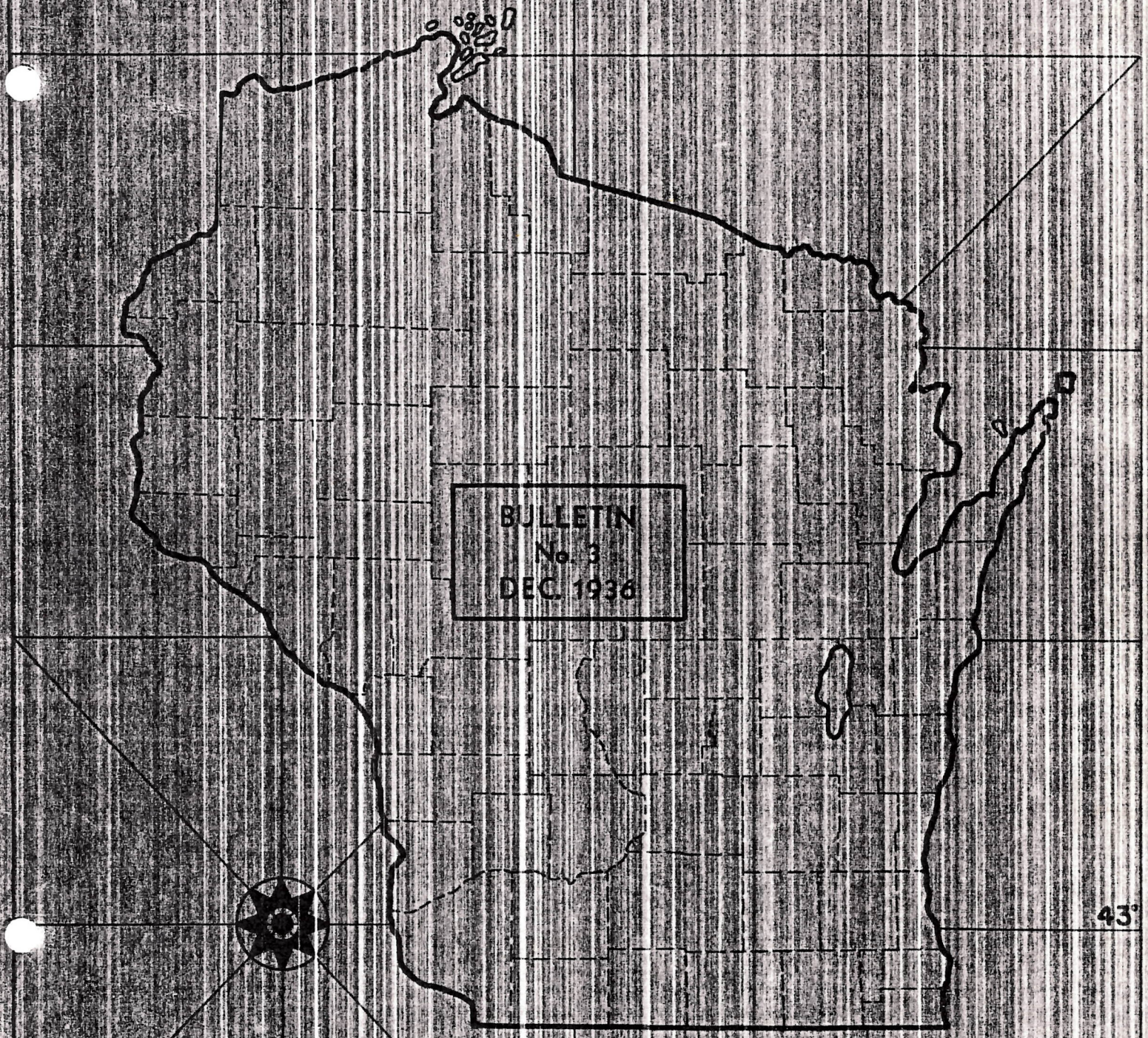

A CONSERVATION AND RECREATION PLAN
FOR
SOUTHEASTERN WISCONSIN

A CONSERVATION AND RECREATION PLAN

FOR

SOUTHEASTERN WISCONSIN

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Madison, Wisconsin
December, 1936

CONTENTS

	Page
INTRODUCTION	1
Previous Land Use Policy	1
RECREATION IN SOUTHEASTERN WISCONSIN	3
Present Needs	3
Methods of Selection	5
The Areas Selected	11
1. The Kettle Moraine Park & Forest Area	11
2. The Lake Michigan Coast Development	21
3. The Connecting Parkways	23
4. Smaller Suitable Park Areas	23
THE CONSERVATION AND RECREATION PLAN FOR SOUTHEASTERN WISCONSIN	Back Cover
ACKNOWLEDGMENTS	28

LIST OF ILLUSTRATIONS

		Page
Plate I.	Location and size of existing state parks	4
Plate II.	Comparison of state park acreage and population	6
Plate III.	Comparison of all park areas and population	7
Plate IV.	Areas topographically undesirable for agriculture	8
Plate V.	Areas having soils undesirable for agriculture	9
Plate VI.	Conservation and recreation plan for southeastern Wisconsin	Back Cover
Plate VII.	Morainal topography near Whitewater—Walworth Co.	10
Plate VIII.	Gravelly subsoil—Walworth Co.	12
Plate IX.	Stony field—Washington Co.	12
Plate X.	Sand dune—Jefferson Co.	13
Plate XI.	Typical Kettle Moraine Topography—Fond du Lac Co.	14
Plate XII.	Kettle Moraine land that has been grazed and denuded—Walworth Co.	15
Plate XIII.	Ungrazed forest in Kettle Moraine—Fond du Lac Co.	16
Plate XIV.	Arbored drive in Kettle Moraine—Sheboygan Co.	17
Plate XV.	Abandoned farm in Kettle Moraine—Waukesha Co.	18
Plate XVI.	Undrained marsh—Sheboygan Co.	18
Plate XVII.	Lakes in the Kettle Moraine—Sheboygan & Fond du Lac Cos.	19
Plate XVIII.	Whitewater Lake—Walworth Co.	20
Plate XIX.	Lotus blossoms in Spring Lake—Jefferson Co.	20
Plate XX.	Scenes along the Lake Michigan coast—Sheboygan & Ozaukee Cos.	22
Plate XXI.	Scene along the suggested Milwaukee R. Parkway—Ozaukee Co.	24
Plate XXII.	Scene along the suggested Fox R. Parkway—Racine Co.	24
Plate XXIII.	Scene along the suggested Rock R. Parkway—Jefferson Co.	25
Plate XXIV.	Scene along the suggested Rock R. Parkway—Rock Co.	25
Plate XXV.	Scene along the suggested Sugar Creek Parkway—Walworth Co.	26
Plate XXVI.	Picnic Point—Dane Co.	27

"A nobler want of man is served by nature, namely, the love of Beauty . . . . To the body and mind which have been cramped by noxious work or company, nature is medicinal and restores their tone. The tradesman, the attorney comes out of the din and craft of the street, and sees the sky and the woods, and is a man again. In their eternal calm, he finds himself. The health of the eye seems to demand a horizon. We are never tired, so long as we can see far enough . . . . Beauty is the mark God sets upon virtue. Every natural action is graceful. Every heroic act is also decent, and causes the place and the bystanders to shine. We are taught by great actions that the universe is the property of every individual in it."—RALPH WALDO EMERSON.

INTRODUCTION

SOUTHEASTERN Wisconsin comprises only one-seventh of the land area of the state but contains more than half of the population or about one and one-half million people. This is the area in which most of the future population growth of the state can be expected. These people have no adequate state parks. To them, the existing state recreational facilities are remote. That the present distribution of state parks in Wisconsin is not such as to afford reasonable park service to the population is quite evident.

This is a situation, however, that can be remedied. In the Kettle Moraine, adequate areas of suitable park lands are available for southeastern Wisconsin. Not only are they desirable for park use but are also suitable for forest crops and game refuges. Why are these lands suited for these uses? Because, due to their rough topography and stony soil these are sub-marginal lands whose agricultural value is low, because they are within easy reach of the dense population in southern Wisconsin, because these available lands are large enough in area to accommodate a great number of people without destruction to the forest and plant growth, and because the conservation of water resulting from the reforestation of these lands would raise the ground water table, stabilize the flow of streams at all times and aid in the restoration of the delicate balance of the hydrologic cycle.

Additional suitable park land may be found along the coast of Lake Michigan. This coast with its many sand dunes and associated vegetation, wave-cut clay bluffs and white sand beaches is a great scenic asset and perhaps the finest undeveloped park area in the state. A body of fresh water the size of Lake Michigan is in itself a natural wonder. It does not easily become polluted nor does it become warm during periods of prolonged hot weather. The beach is of ample size to accommodate an almost unlimited number of bathers. This Lake Michigan shore is rapidly being subdivided. It should never be allowed to develop in a manner which may eventually exclude the general public from its enjoyment.

The development of parkways along the more important water courses are an integral part of the plan. Such parkways will preserve the natural beauty of the water courses, they will aid in the conservation of water resources and they will provide through the various counties, beautiful residential areas with scenic drives which will tie the park areas and cities together into a park and parkway system.

It is the aim of this plan to conserve the water and timber resources of the southeastern part of the state and to provide a large and sufficient system of recreational areas and facilities which, by virtue of their close proximity to the large centers of population, will be readily accessible to all of the people of the most populous part of the state.

Previous Land Use Policy

Nature endowed the United States with vast forests of merchantable timber and extensive areas of rich soil. This is a nation whose rapid expansion is unparalleled in history. There never has been a people who so carelessly exploited their natural resources.

In the comparatively short span of 70 or 80 years, we have felled the greater part of our forests. Today the far western states of Washington and Oregon, more than 2,000 miles from the center of population, are the nation's chief source of timber supply.

Similarly in the past 74 years, there existed a nation-wide scramble for new agricultural land. In Wisconsin the plow followed rapidly in the wake of the vanishing timber. A flourishing foreign trade, a swelling urban population and, as a climax, the World War resulted in an agricultural boom that has been unprecedented in the history of agriculture.

Today this great foreign market does not exist as far as the United States is concerned and there is reason to believe it will never again reach the proportions it did in the late 19th century. Europe gets its food cheaper elsewhere. We are left with the results of a reckless policy of land and forest exploitation on our hands.

During this agricultural boom, arid lands were irrigated and semi-arid grasslands were tilled.

In Wisconsin, swamps were drained in wholesale fashion and hills and slopes were, and still are, being denuded of forest cover. Unconsciously, the nation was doing everything it could to increase the run-off of water and encourage erosion.

After the war, when the country returned to a semblance of normalcy, we began to realize that the timber resources of the nation were alarmingly near depletion. Slowly the conservation movement spread. In Wisconsin, Timber Crop laws were passed, zoning ordinances establishing forestry districts and encouraging timber crops were effected, state and county forests were established and the federal government, whose forest areas had heretofore been limited to certain regions in the public domain in the western states, established national forest purchase areas in northern Wisconsin as well as other mid-western states, and commenced to purchase large tracts of cutover land from individual owners.

The summers of 1934 and 1936 witnessed the most serious years of drought in recent history. Many lakes disappeared, water tables in certain areas lowered with alarming rapidity and on May 11, 1934, dust, fertile top soil blown 2,000 miles from the Great Plains, fell for the first time in New England. The results of reckless agricultural exploitation and the practice of "rushing the rainfall to the sea" were beginning to take their economic toll.

The recent years of drought have taught us that there is an intrinsic value in a tree other than the number of "boardfeet" into which it will saw. Trees, together with swamps and marshes, are very important conservators of water, and water is vital to agriculture. If poor land is retired from agriculture and allowed to grow into trees, the productivity of the adjacent good land is increased since the nearby forest conserves the water table and prevents drying winds from blowing over the fields. Trees also have a very real aesthetic and recreational value.

Today, in southeastern Wisconsin, there are considerable acreages of rough, stony land and drained swamps that during the agricultural boom economically supported agriculture but now are submarginal. It is land of this type with which we are primarily concerned. If it is not suited or adapted to agriculture, what is its use? Why cannot this sub-marginal land supply the needed recreational acreage? Why cannot this same land be used as a timber preserve? Why cannot this same timber aid in the conservation of water and wild life? We think that there are no good reasons why it cannot be so used and that the proper development of an adequate recreation program, utilizing the sub-marginal lands of southeastern Wisconsin will return values far in excess of any reasonable costs. We, therefore, present a plan for a recreational development of the southeastern Wisconsin region which consists of three main features:

1. A park and forest development along the Kettle Moraine which extends from northwestern Walworth County, in a northeasterly and northerly direction through Sheboygan County.
2. The development of the shores and beaches of Lake Michigan.
3. A system of parkways or parkway-like highways throughout the area utilizing existing highways as much as possible.

In presenting the outlines of the plan, it is not meant that the plan is complete, or exclusive as to developments either inside or outside of the area treated. We present our ideas which are subject to such amendment and addition as good taste will dictate and the available resources make possible.

> "Make no little plans; they have no magic to stir men's blood, and probably themselves will never be realized. Make big plans; aim high in hope and work, remembering that a noble, logical diagram will never die but long after we are gone will be a living thing, asserting itself with growing intensity. Remember that our sons and grandsons are going to do things that would stagger us. Let your watchword be order; and your beacon, beauty."
>
> DANIEL H. BURNHAM.

RECREATION IN SOUTHEASTERN WISCONSIN

A. Present Needs

THAT there exists at the present time an urgent need for recreational acreage and facilities in the densely populated areas of Wisconsin is easily understood (See Plate I). The National Parks of the United States for the most part, embrace large wilderness areas in the distant parts of the nation, and most of our state parks preserve some particular scenic feature in the sparsely inhabited and remote parts of the state.

Most of our unusual scenic preserves are definitely non-agricultural regions, since one of the contributing factors to rare scenery is unusually rough or varied topography. Areas containing canyons, hills, gorges, waterfalls and similar features are also always areas of sparse population since it usually is impossible to earn an existence from such land. Lands of this type were among the earliest to be converted into public park use because they were unwanted by individuals for private enterprise, and could be purchased by federal or state governments at relatively low costs.

While it is most fortunate that areas of this type are being preserved for the public enjoyment and wonderment, the location of such lands for the recreational needs of the mass of the population is now such that only those persons possessing ample leisure time and sufficient funds can visit and enjoy them.

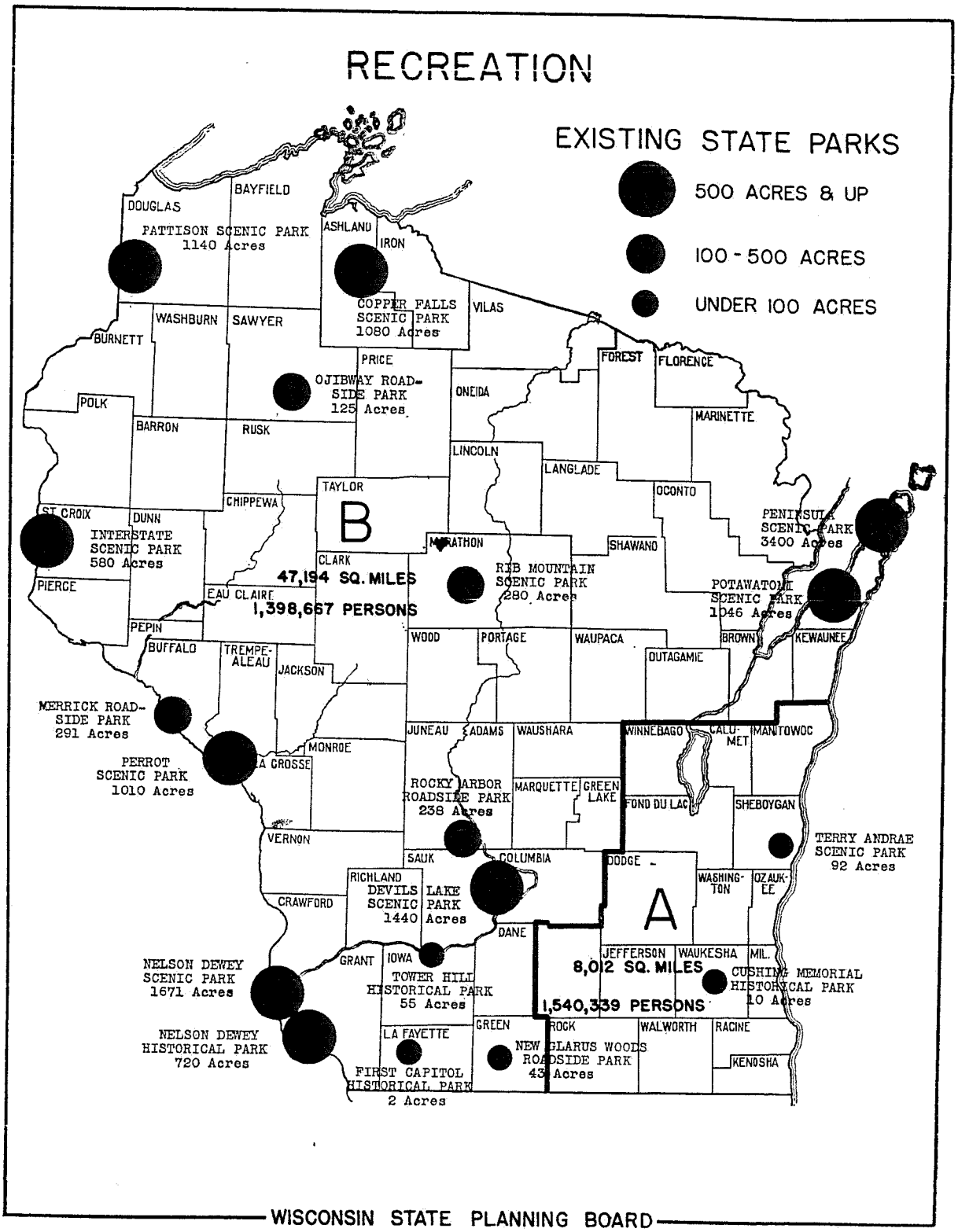
Plate I shows the state roughly divided into two provinces whose population is about equal. However, that half of the population dwelling in Area "A" occupies only 1/7 of the total area of the state. It is the need for suitable recreational areas within this 1/7 of the state's area, and for its million and a half people, with which this report is primarily concerned. Plate I also shows the size and distribution of existing state parks.

Development of parks and recreational areas should afford maximum recreational facilities to the maximum number of persons. While it is relatively simple to set aside sufficient acreage for this purpose, it is highly important that these areas be so distributed that they are readily accessible to the largest number and it may be increasingly difficult to secure such distribution as the state continues to develop. The problem is further accentuated with the concentrated growth of a population which requires extensive recreational areas in already congested localities.

Population growth in Wisconsin, especially during the last thirty or forty years, has been centered exclusively in and around industrial communities. The southeastern section of the state, embracing the largest and most important industrial centers, has experienced an increase in population far in excess of that occurring in the rest of Wisconsin. Between 1900 and 1930, while the state as a whole showed a population increase of 42%, the southeast area increased by 72% and all of the remainder of the state by only 19%. This is attributable to the type of development which has predominated in Wisconsin since 1900, namely, urbanization. Seventy-five percent of the urban population is in the southeastern part of the state.

In 1900, southeastern Wisconsin (Area "A"—Plate I), contained only 43% of the total state population but in 1930 it embraced over 52%. Thus by 1930 over one-half of the people in Wisconsin was settled on 1/7 of the state's area. It is estimated that by 1960 a still greater proportion of our people will occupy this region.

The State of Wisconsin has in the past endorsed a policy looking toward the acquisition and development of state parks. This is evidenced by the statements contained in Chapter 27 of the Statutes. Such a policy is apparently premised upon the fact that local communities are not in a position to acquire areas sufficiently large to supply proper recreation facilities for large populations within their own boundaries. It is obvious that a policy so adopted should, above all things, have a degree equity in its development which will best serve all the people in the state. It must be borne in mind that a primary factor in an equitable distribution is relatively easy access to such state park areas by all the people of the state. Southeastern Wisconsin, containing 1/7 of the area and more than half of the population, now has only 102 acres out of a total of the 13,223 acres of state park land.



WISCONSIN STATE PLANNING BOARD
NOVEMBER 1936
PLATE I.

In view of the expected increase in the population of the southeastern section, this maldistribution of state parks will grow worse unless adequate plans to satisfy the present needs and provide for future requirements are adopted now.

The closer that large parks are located to areas of dense population, the more intensive will such parks be used. This statement is well supported by the 1936 attendance records of the National Parks. The Department of the Interior reports: "Of special interest to the section of the United States east of the Mississippi is the fact that the parks of this region were highest on the travel list." Shenandoah National Park in Virginia, not created until July 3, 1936, led all the old established parks. Great Smoky Mountains National Park in North Carolina and Tennessee, a park only two years old, was second. Rocky Mountain National Park, Yellowstone and Yosemite, long established, long advertised and far better known, trailed both of these eastern parks in attendance. The reason for the high attendance in these two eastern parks is their relative proximity to the dense eastern population for, while the scenery of these eastern parks is charming, it does not approach in interest the natural wonders of the west. These, of course, are national parks for which no sites have as yet been selected in Wisconsin.

The 1935 legislature authorized the purchase for State Park purposes of 720 acres of land in Grant County comprising the old farm of Nelson Dewey, first governor of the state. While it is no doubt well to preserve historical landmarks, the need for additional state park acreage in this remote and sparsely settled part of the state is in no degree as pressing as it is in the more densely populated portion of the state.

Plates II and III show graphically the deficiency of recreational areas in the southeastern part of the state. The State Planning Board, with the cooperation of the Conservation Commission and other interested groups, has undertaken this study of southeastern Wisconsin to determine what areas in this region are of a proper type and location to supply the deficient recreational needs of southeastern Wisconsin.

B. Methods of Selection

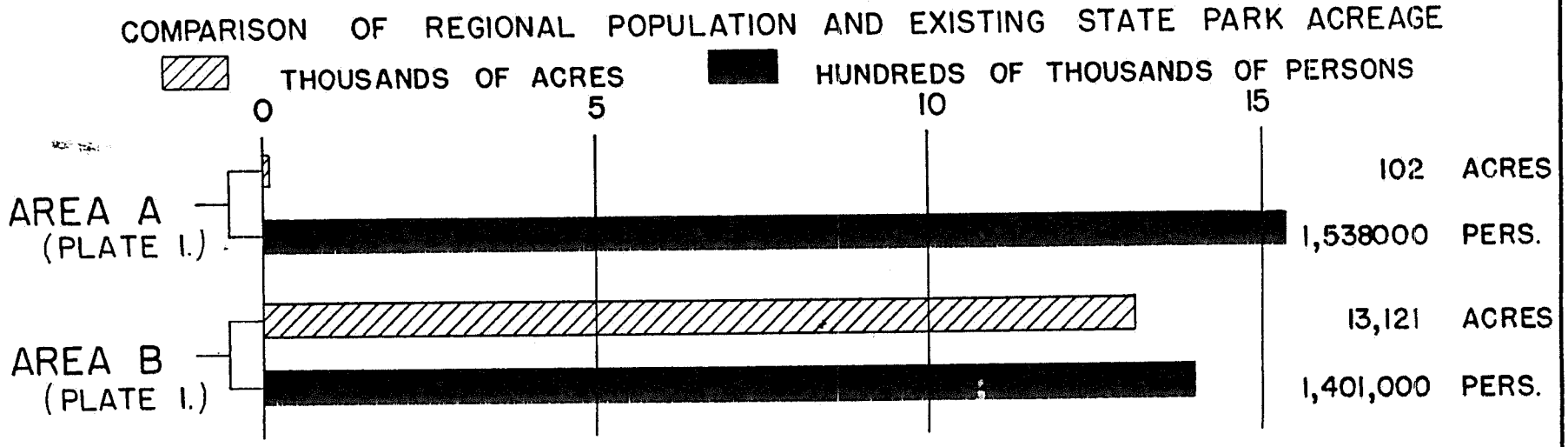
In 1909, John Nolen, landscape architect, prepared for the then existing State Park Board of Wisconsin a report entitled "State Parks for Wisconsin". Mr. Nolen's five basic requirements for state parks or state recreational forests are so fundamental and comprehensive that today, twenty seven years later, they still are the criteria by which such areas should be selected. In studying the state park and forest sites in southeastern Wisconsin, Mr. Nolen's following basic requirements were guiding measures.

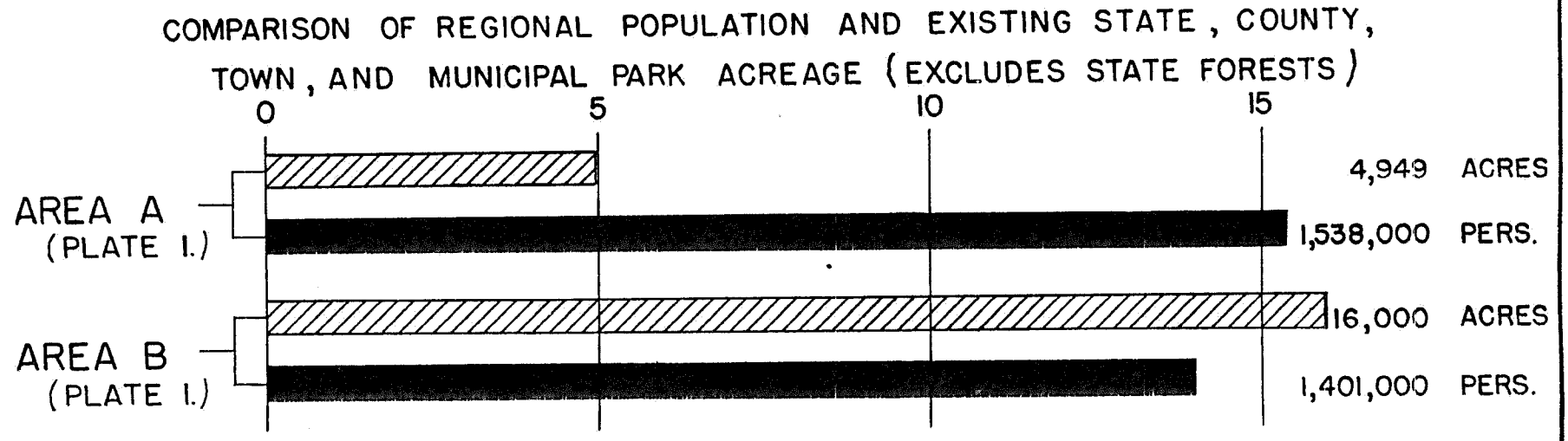
"State Parks, like other parks, have definite purposes to serve and therefore should have definite requirements. Their main purpose is to refresh and strengthen and renew tired people, to fit them for the common round of daily life. The City Parks may be thought to serve this purpose also, but it is not to any great degree. In the first place, only large cities can afford large parks and even then they are too small, as a rule, for broad scenic effects; secondly, cities are located for commercial, business or transportation reasons and seldom possess invigorating climate or natural features of special beauty or interest,—or, if they do, the demands of commerce are such, or are thought to be, that the preservation of these features is not considered practicable.

"What are the requirements of State Parks? They may be conveniently summarized under five heads. (1) They should be large; otherwise they could not be used by great numbers of people without destruction of the very qualities most essential to their purpose. (2) State Parks should be accessible—not to the degree that City Parks are, but accessible by train or vehicle within reasonable time and at reasonable expense. (3) The air and climate of sections within which State Parks are located should be salubrious, and the situation healthful. Especially should the climate of the summer months, the period that most people have for vacations, be agreeable. In the course of years State Parks are likely to be more or less visited at all seasons, as Nature offers a reward in every month to her visitors. (4) The property for State Parks should be reasonable in cost. Not only should the first cost be low but the property should be of such a character as to require relatively small expenditures for construction and maintenance. It should be a 'natural' park, one of such intrinsic beauty as to require little outlay for improvements (except for roads, paths and other features necessary to its use) and up-keep. (5) Finally, the site for a State Park should, above all, have a decidedly uncommon charm and beauty, a distinction among landscapes, an irresistible appeal to the Nature lover. Here there should be no room for doubt, for failure in this point means complete failure."

RECREATION

PARK REGIONS





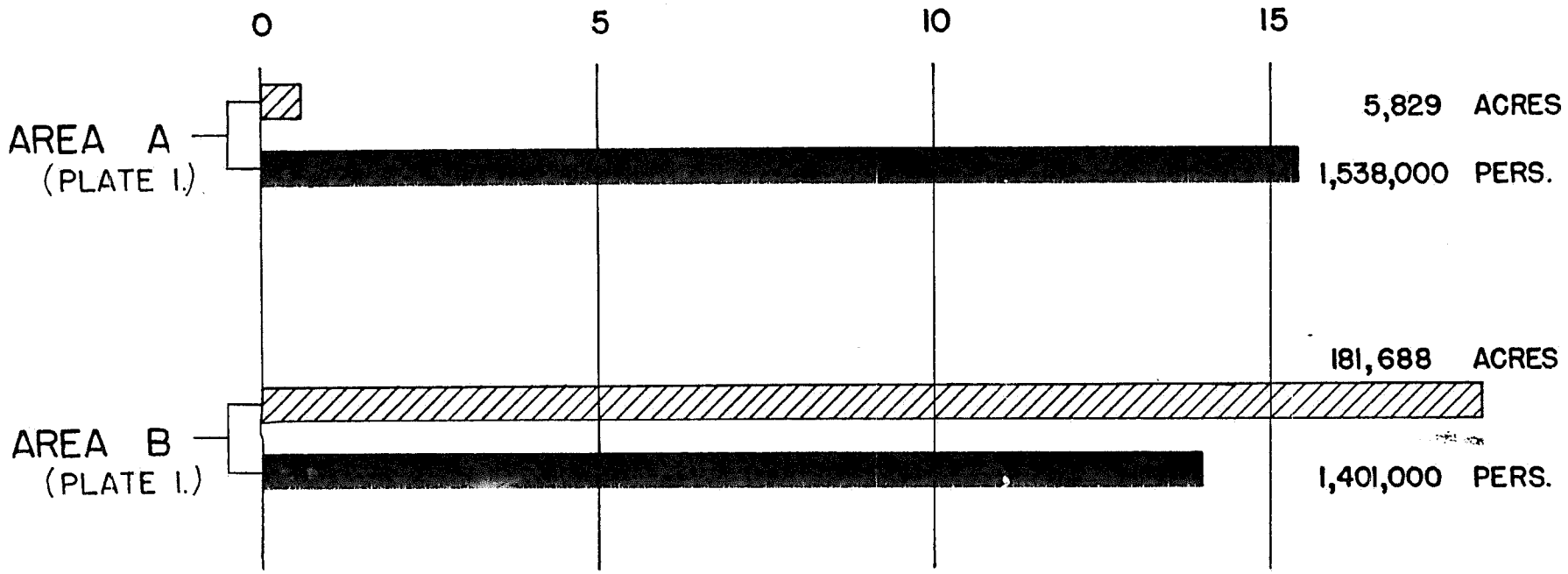
WISCONSIN STATE PLANNING BOARD
NOVEMBER 1936
PLATE II.

RECREATION

PARK REGIONS

COMPARISON OF POPULATION AND EXISTING STATE, COUNTY, TOWN, AND MUNICIPAL PARKS AND STATE FORESTS.

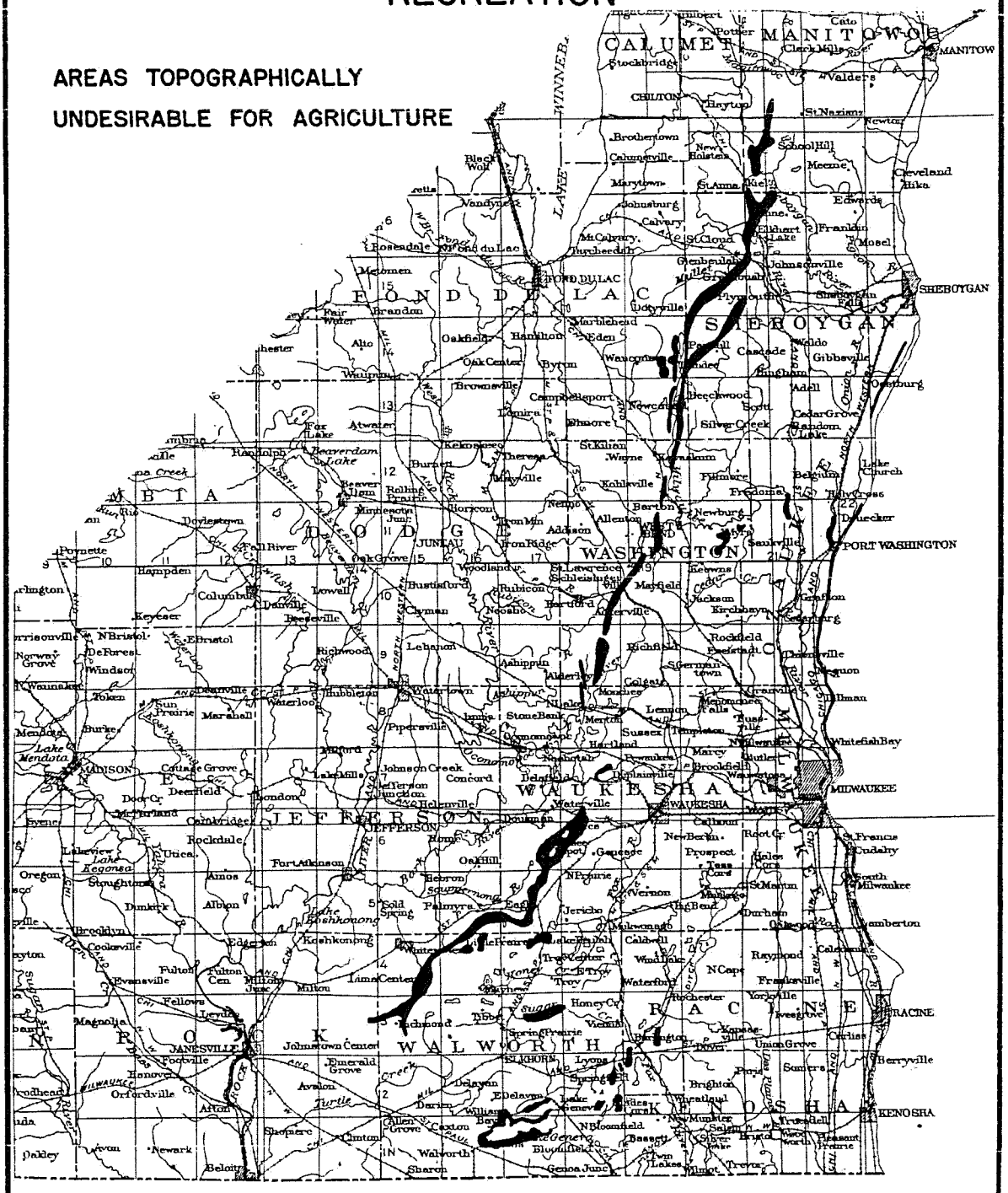
TENS OF THOUSANDS OF ACRES — HUNDREDS OF THOUSANDS OF PERSONS.



WISCONSIN STATE PLANNING BOARD
NOVEMBER 1936
PLATE III.

RECREATION

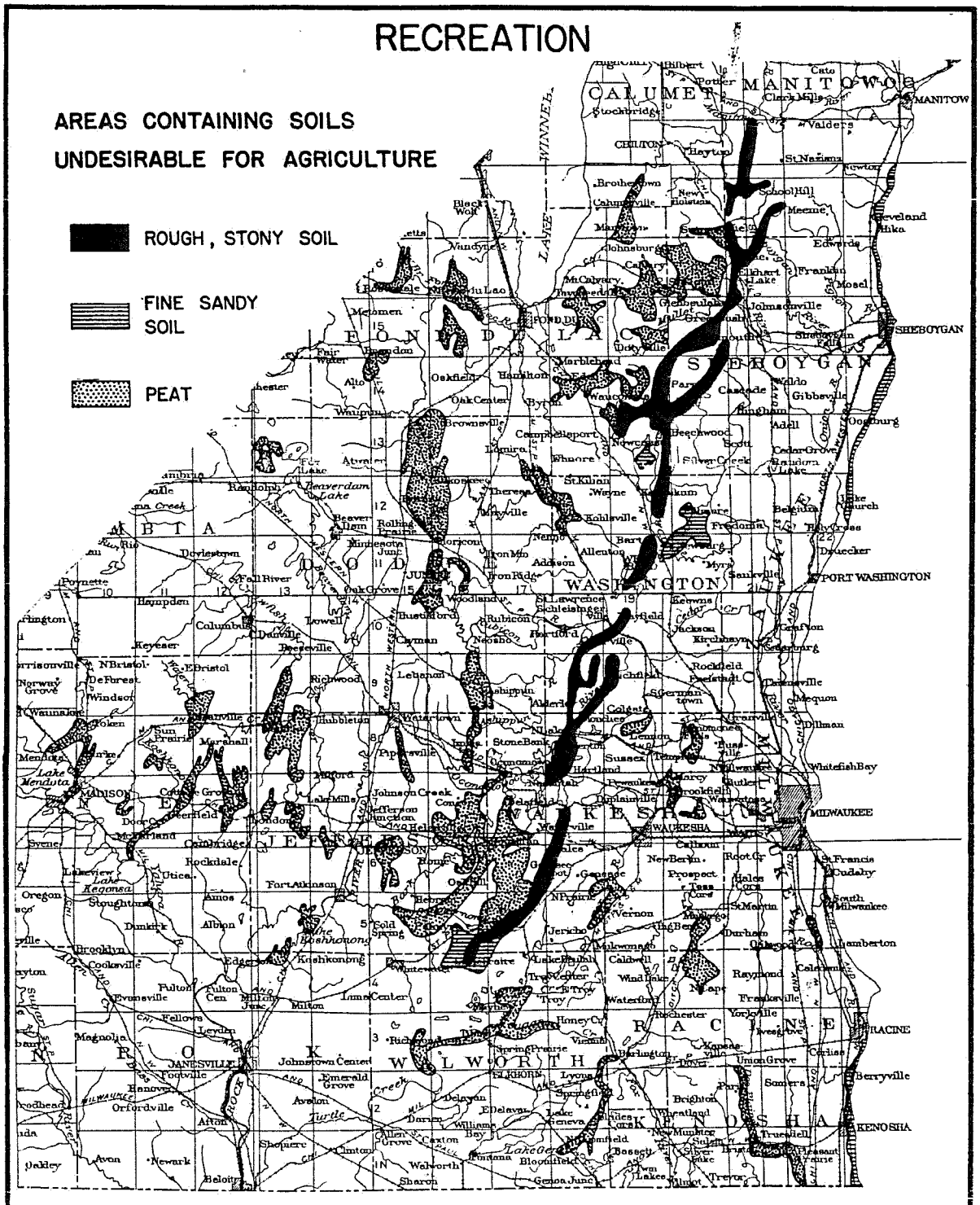
AREAS TOPOGRAPHICALLY UNDESIRABLE FOR AGRICULTURE



SOURCE : U. S. G. S. TOPOGRAPHIC MAPS

WISCONSIN STATE PLANNING BOARD
NOVEMBER 1936
PLATE IV.

RECREATION



SOURCE : GENERAL SOIL MAP OF WISCONSIN BY A. R. WHITSON

WISCONSIN STATE PLANNING BOARD

NOVEMBER 1936

PLATE V.

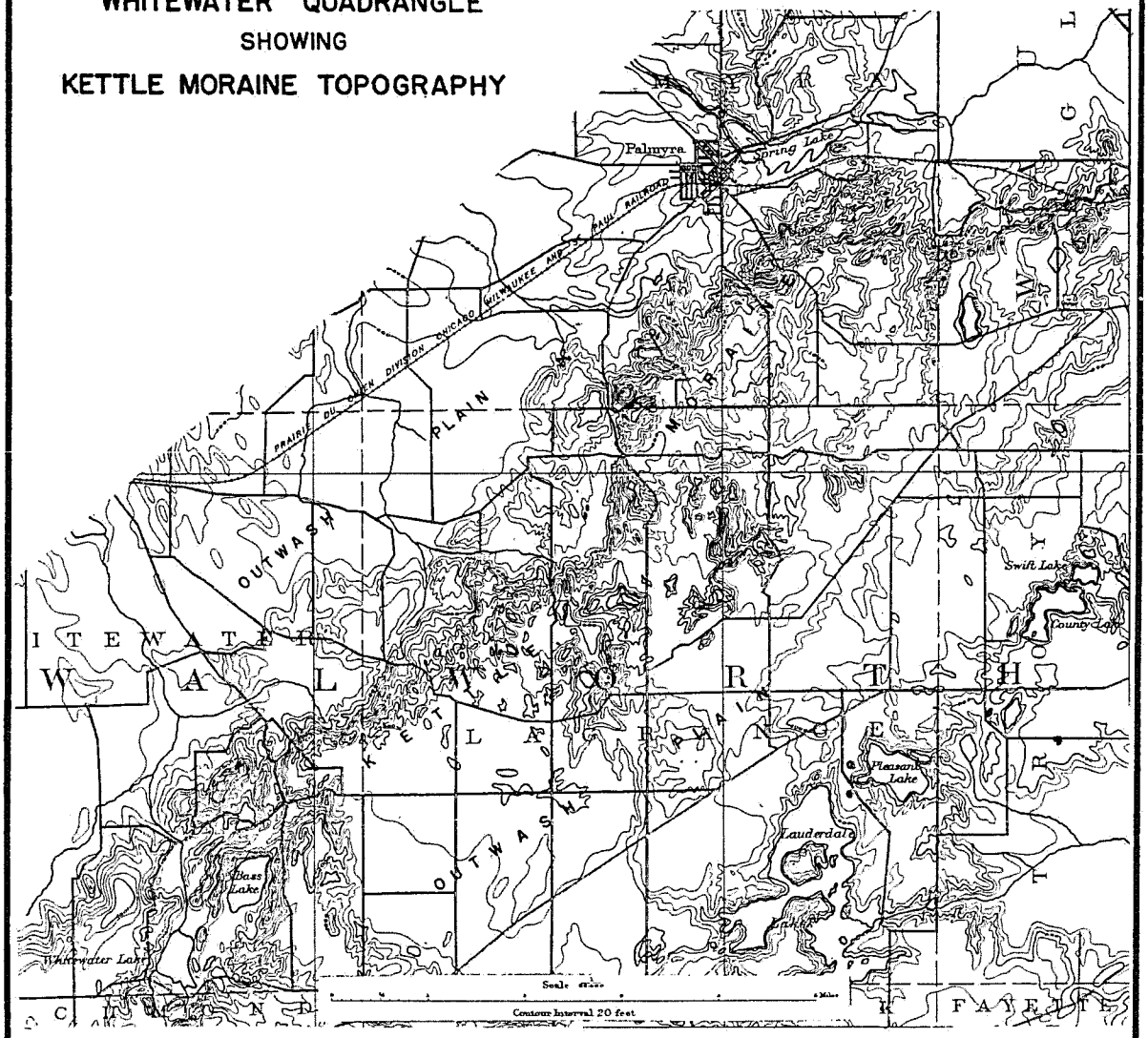
RECREATION

PART OF

WHITEWATER QUADRANGLE

SHOWING

KETTLE MORAINE TOPOGRAPHY



WISCONSIN STATE PLANNING BOARD

NOVEMBER 1936

PLATE VII.

The first step in the study of the physical aspects of southeastern Wisconsin to determine the areas most suited for park purposes, was the examination of the United States Geologic Survey's topographic maps. From these maps, the areas that are non-agricultural because of severe topography were super-imposed on the Rural Electrification township base maps, which show the location and relative condition of all farm buildings. Plate IV shows the location of these areas.

The second step was the mapping of the areas of non-agricultural soil as shown on the detailed county soil maps. These non-agricultural soils include the Rodman gravel, the Rodman Fine Sand, Dune sand and certain of the more stony phases of the Miami Gravelly Loam. Of these, the Rodman gravel has the most extensive distribution in southeastern Wisconsin, Plate V.

The third step consisted of studying the Economic Land Inventory maps. From these maps, the location of the existing forest cover and the location and degree of tax delinquency was obtained.

As a fourth step, all of the scenic and non-agricultural areas in southeastern Wisconsin were examined in the field and the accuracy and soundness of the map studies checked.

The Rural Electrification base maps, on which are entered much of this salient information, are on file in the office of the State Planning Board, to be used when the execution of the recreation plan is commenced.

C. The Areas Selected

1. *The Kettle Moraine Park and Forest Area*

Shown on the map of the proposed Recreational System of southeastern Wisconsin, Plate VI (back of report), and located in the heart of the densely populated portion of the state, is a large proposed park and forest area beginning in northern Sheboygan County (it might well reach into Manitowoc County) and extending roughly in a SSW direction to the northwest corner of Walworth County. This area contains the Interlobate Terminal Moraine and its associated topography.

Terminal moraines are accumulations of glacial drift (generally rugged gravelly hills) that were deposited at the terminus of the continental ice sheet which moved down from northeastern Canada and covered the greater part of the northeast and north central states. These moraines represent the accumulations of material over a considerable period of time during which the rate of melting equalled the rate of ice advance, thus allowing the debris released from the melting ice sheet to accumulate in a high irregular ridge along the ice front.

The Interlobate moraine, formed between two ice lobes, exhibits an extremely rough, hummocky topography with high, steep hills and thousands of deep, kettle shaped holes from which characteristic its popular name, Kettle Moraine or Kettle Range, is derived. The region is one of the world's finest natural laboratories for the study of glacial geology.

Bordered on the east and the west by level, fertile agricultural lands, the Kettle Moraine rises as a rough, irregular range of hills, and is the largest continuous area of sub-marginal land in southeastern Wisconsin. Plate VII (from the U. S. G. S. Whitewater Quadrangle) shows a part of this severe moraine topography. It can readily be seen that such slopes as these are much too steep and irregular to be tillable.

The soil of which the Kettle Moraine is composed is known as the Rodman gravel. This soil consists of coarse sand, gravel, cobbles and boulders and is structurally very loose and open, causing extreme susceptibility to drought. (See Plates VIII and IX.) In several instances, farmers have attempted to cultivate some of these slopes, but in one or two years, the very thin soil cover is lost through sheet erosion and the underlying bouldery gravel exposed. When covered with a scattered forest growth, the moraine offers some grazing, but by midsummer, most of the grass dries up and is of little or no value as pasture.

The fact that the Kettle Moraine is unfit for agriculture because of its poor, stony soil and rough, irregular topography is one of the chief reasons why this area is more readily available for recreational and forest purposes.

The thin soil cover, where not lost through attempted cultivation, supports a creditable stand of timber. In Fond du Lac and Sheboygan Counties large areas of the moraine are still left in unpastured forest—remnants of the vast stand of hardwood that once covered the greater part of southern Wisconsin. In Waukesha, Jefferson and Walworth Counties, however, much of the timber on the moraine has been cut off and most of the land is being pastured. In these counties, the moraine is in considerable danger of being completely de-

Plate VIII. Subsoil of the Rodman Gravel. Note the thin layer of topsoil. This is characteristic of what is found when excavations are made in the Kettle Moraine hills.—Walworth Co.

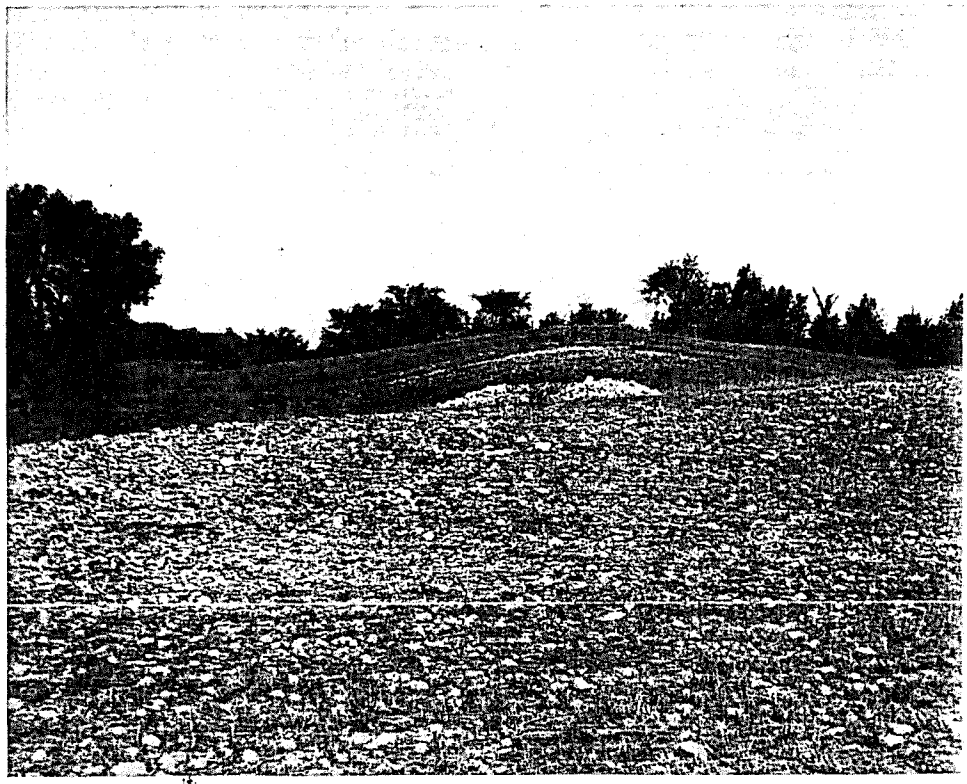


Plate IX. Cultivated field in the Rodman Gravel (foreground). Through cultivation, the thin layer of topsoil is lost. This oat crop was sown in the stony subsoil. —Washington Co.

Plate X. Small sand dune in the Rodman fine sand, an outwash soil associated with the Kettle Moraine. Note the blow sand at the edge of the cultivated field in the background. This soil is of low agricultural value, but as can be seen, supports a creditable stand of timber.—Jefferson Co.

nuded in the not far distant future. This will result in the eventual loss of the thin soil cover through sheet erosion and the reduction of flow of the many springs that feed most of the important streams in this section of the state. The foresters of the Economic Land Inventory staff have reported that if the cutting of woodlot timber in Waukesha County had continued at the 1929–1934 rate, in 12 years there would not have been a standing tree in the county.

In these regions where the moraine is denuded, the gravel ridges rise above the level of the outwash plain as a dry, sere, rough wasteland. Where forested, the hills take on a cool lush appearance and the rough, interesting topography with a well developed forest growth, is a feature of exceedingly great beauty. (See Plates XI, XII and XIII.) The restoration of forest cover on the denuded hills is possible if the soil cover still remains. The removal of cattle and other grazing stock from partially timbered areas will allow what trees remain to seed themselves.

A forest cover reduces run-off and increases infiltration and absorption of rainfall, thus conserving ground water, without which, all crops would perish, since even in well watered areas the rainfall during the growing season is not sufficient for the production of a full crop. Since the evaporation of water from cultivated fields is very rapid, plants rely on underground water for much of their sustenance. A forest cover, through the many leaf surfaces, also provides to the atmosphere, the slow, continuous transpiration of water which will return to the earth again as rain.

Many creeks and rivers have their principal source in springs or kettle hole lakes in the Kettle Moraine. Among these are Turtle Creek, Scuppernong Creek, Cedar Creek, the Bark River, Little Fox River, Menomonie River, Milwaukee River and the more important branches of the Rock

Plate XI. Typical Kettle Moraine Topography, showing completely denuded land of low agricultural value. Note the fine stand of unpastured timber in the background. This interesting topography, when wooded, is ideal recreational land.—Fond du Lac Co.

River. The conservation and perpetuation of these stream sources is closely allied with the restoration and conservation of the forest cover of the moraine. Here, then, is an excellent use for land which has little value for agricultural purposes but well adapted to forestry, conservation and recreation.

However, the natural beauty of the area and its ability to support a forest crop is not its only recreational asset. More important still is the fact that it is easily accessible to a large population that at the present time has inadequate state park facilities. The long, narrow shape of the moraine and its geographical location in respect to the large cities of southeastern Wisconsin, accounts for its unusual recreational potentialities. The area is only an hour's drive or less from all of the important cities of southeastern Wisconsin. (See Plate VI back of report.)

The acreage is ample to accommodate thousands of visitors as well as Boy Scout camps, young people's groups and similar organizations, with no feeling of congestion. National Youth groups have here an area that can be reached in a short time at low expense, and, under the direction of the Conservation Commission, can be taught co-operative forestry, conservation and similar nature-lore.

The unusual shape of the area, 85 miles in length and but a few miles in width, makes it ideal for the development of automobile trails, hiking trails and bridle paths. The bridle path and hiking trail has been very popular in the eastern states and this form of recreation should meet with immediate approval in this section of the country.

Because of the variety of recreation this area has to offer, swimming, boating, picnicking, riding, hiking, fishing, together with many winter sports, this proposed park should attract large crowds.

Plate XII. Partly denuded, grazed Kettle Moraine land, showing typical topography. Purdue Univ. Bulletin 391 states that in grazed woodlots the growth of forage plants alone is not sufficient to maintain animal weights over a six months period.—Walworth Co.

Yet there is enough room to allow the solitary nature lover to hike into the more inaccessible regions and be away from the activities of other visitors. As a state owned region, the public will have access to the shores of many beautiful inland lakes—a privilege now rapidly disappearing through private ownership.

There are twenty or more lakes and thousands of acres of marsh land located in, and adjacent to, the Kettle Moraine. Some of these lakes are shallow and reedy, of little value for boating, swimming or fishing, but are ideal habitats for waterfowl. Many of these swamps have been drained, but their crop yield is low and their contribution to the agricultural wealth of the region is negligible. They might well be restored to their natural state, in which condition they would not only provide nesting and feeding areas for migratory waterfowl, but would aid in restoring the balance to the hydrologic cycle by providing large surfaces of water for evaporation to the atmosphere and by acting as storage reservoirs during periods of heavy rainfall.

In addition to the swamp lands associated with the Kettle Moraine, five other large marshes are shown on the Recreational Plan as being suitable for waterfowl preserves. Only one of these areas is adjacent to the Kettle Moraine, but the other three fit into the southeastern Wisconsin park system in that they are located on potential parkways.

These five areas include approximately 19,000 acres of swamp land and comprise the Des Plaines

Plate XIII. Ungrazed forest of oak, hickory and walnut in the Kettle Moraine. Note the complete ground coverage and the saplings and seedlings. This undergrowth stops drying winds from blowing over the land and conserves the water table. Grazing destroys such undergrowth. The denuded portions of the moraine can and should be restored to beautiful recreational forests such as is pictured above.—Fond du Lac Co.

River Swamp in Kenosha County, Wind Lake Marsh in Racine County, Mukwonago Marsh in Waukesha County, Sheboygan Marsh in Sheboygan County and the celebrated Horicon Marsh, whose stormy history in the annals of Wisconsin legislation and litigation is a typical example of the results of attempts, by drainage, to convert peaty marsh land into agricultural productivity.

The president's committee on Wild Life Restoration reported in 1934 that: "Our migratory waterfowl, a great economic and recreational asset once present in prolific abundance is now threatened with virtual extinction by the destruction of breeding and nesting areas.

"An ironic commentary on our neglect of waterfowl nesting areas is had in the proclamation of President Theodore Roosevelt setting aside Lower Klamath Lake, Oregon, as a sanctuary, in which he said, 'this is one of the greatest wild fowl nurseries in the United States. * * * An outdoor museum * * * which will prove of great educational value'.

"And in the report of F. L. Lathrop in 1932 which states, 'Lower Klamath Lake was drained after much difficulty and expense and dried up—devastated by numerous fires and abandoned as unfit for agricultural development'.

"The rapid depletion of the migratory waterfowl resource, now universally admitted to be a fact,

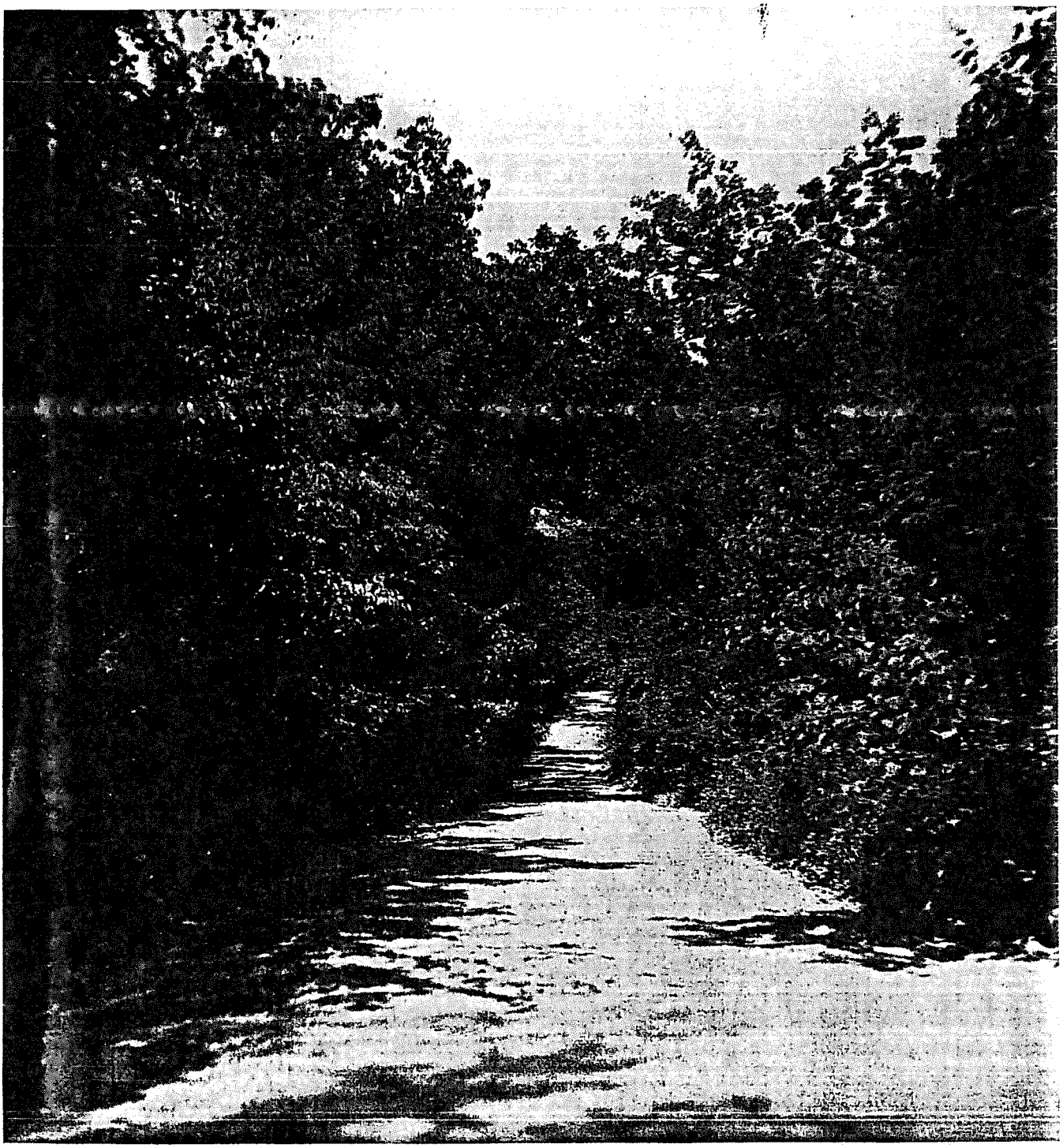


Plate XIV. An arbored drive in the Kettle Moraine. Many miles of wooded trails such as this can be developed in the moraine and will add materially to the recreational value of the area.—Sheboygan Co.

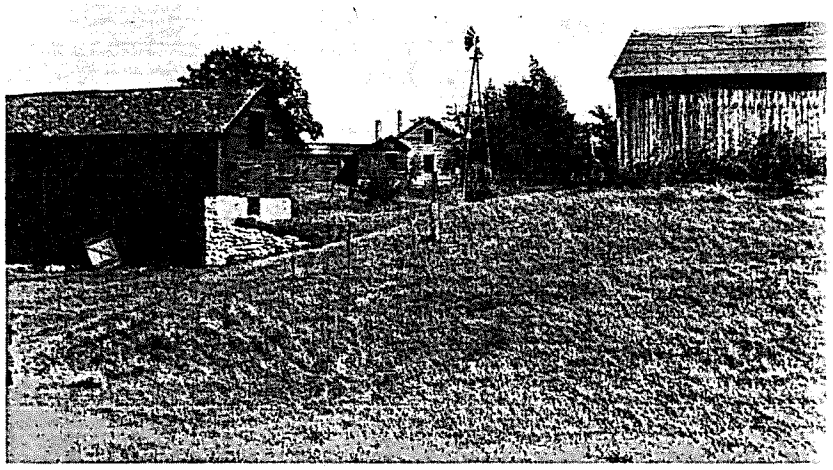


Plate XV. Abandoned farm on the Kettle Moraine. Many farms such as this may be found on the poor and depleted soil and rough topography of the moraine.—Waukesha Co.

Plate XVI. Undrained marshes like this provide excellent cover for game and aid in the conservation of the water table. Note the fine timber on the Kettle Moraine in the background.—Sheboygan Co.

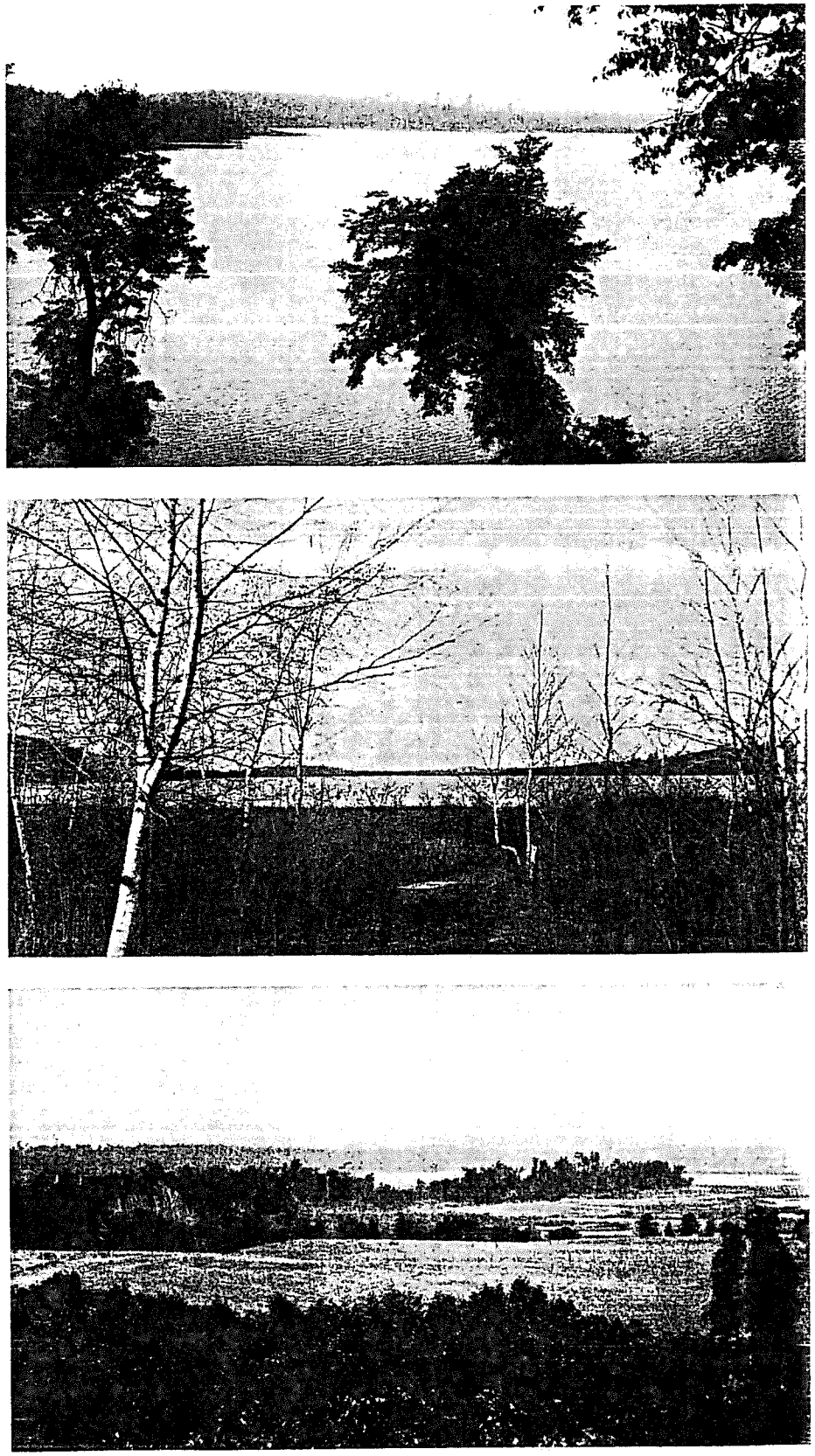


Plate XVII. Lakes in the Kettle Moraine. Round Lake (upper), Long Lake (center), and Crooked Lake (lower). The recreational value of fine lakes, woods and rolling topography such as is shown here cannot be under-estimated.—Sheboygan and Fond du Lac Cos.

Plate XVIII. The recreational value of the southern end of the Kettle Moraine is enhanced by lakes and kettle hole topography, Whitewater Lake.—Walworth Co.

Plate XIX. American Lotus blossoms in Spring Lake adjacent to the Kettle Moraine. Many find recreation and pleasure in searching for rare and beautiful wild flowers and shrubs. —Jefferson Co.

is in large part a result of the unwise exploitation of sub-marginal lands."

The five marsh areas shown on the map of the proposed southeastern Wisconsin park system, Plate VI (back of report), together with the lakes, marshes and uplands of the Kettle Moraine forest will supply southeastern Wisconsin with a large preserve for the protection of migratory waterfowl, upland game (which has been reduced to a remnant of its former abundance), fur-bearing mammals, song and insectivorous birds and deer.

2. *The Lake Michigan Coast Development*

The southeastern Wisconsin Recreation Plan, Plate VI (back of report), suggests three lake-coast areas that are suitable for state park purposes, the Edithton Beach property between Kenosha and the Illinois State Line, the frontage north of Racine from Wild Point to Carrollville and substantial additions to Terry Andrae State Park, which, at present, is much too small for the population is serves.

These three lake shore areas should be extended and eventually all be connected with a lake shore scenic drive or parkway. For many miles, state trunk highway 42, if developed along parkway lines, will suffice, or as an alternate, scenic roads leading from the main road to the lake shore, and return, may be used.

Any small lakeshore area that the counties, towns or municipalities should deem advisable to purchase or accept as a gift would fit into the proposed park and parkway development of the Lake Michigan coast. Eventually, Potowatomi and Peninsula State Parks can be brought into the system by extending the parkway into Door County.

The coast of Lake Michigan is one of Wisconsin's finest undeveloped recreational areas and a tremendous scenic asset. The recreational value of this great inland sea and particularly its beach and immediate upland is an asset that should be utilized to the greatest possible extent. Cooling breezes and moderate temperatures are nearly always prevalent. Mosquitoes, the scourge of many smaller lakes, are most generally absent. To many, the scenic view along the coast of Lake Michigan presents an agreeable variation from the fine scenery of the inland lakes of the state. For bathing, a lake of this type is ideal. Because of its size, it will not become easily polluted and it is deep enough to prevent the water from becoming weedy or undesirably warm during prolonged hot weather. The natural beaches are of ample size to prevent an over-crowded condition.

The interesting scientific aspects of the Lake coast are many. The gravel and sand beaches that are existent many feet above the present lake level, and the wave-cut cliffs and terraces present in many places are remnants of the ancient shorelines of the Glacial Great Lakes. The levels of the various stages of these old glacial lakes stood from 14 to 100 feet above the level of present Lake Michigan.

The red clay cliffs or bluffs, which are an imposing part of the scenic view along the lake, are still being cut back by the waves. At exposed points, for example at Racine, the bluff receded nearly 10 feet per year for the 24 years following 1840. Near Manitowoc, this rate of recession was 40 to 50 feet per year following 1905. The tireless work of the waves at the soft, red clay cliffs helps to keep the bluffs steep and the beaches narrow, since off shore currents carry the material lakeward.

In recent years, the building of permeable jetties at vital points along the coast has postponed the rapid rate of erosion. The jetties break the velocity and rhythmic action of the waves causing the water to drop its sand load, resulting in a wider beach.

The sand dunes and glistening white sand beaches are features of infinite charm. The unusual plant life associated with the dune-sand, and the sub-artic vegetation which grows at certain places along the coast and is believed to be a remnant of a much more extensive flora that existed during the cold climate of the glacial age, gives an unusual botanical interest to the lake shore regions.

Since (in Wisconsin) the fee title of the riparian owner on a navigable lake extends to the normal low water mark and such owner has exclusive right of access to the water, as well as title to land formed by accretion, the public is prevented from locating parks or bathing beaches on the shallow beds of lakes suitable for filling, or to straighten the shore or build roads along the water's edge.

Hence, the public cannot lawfully occupy the beach or land along the lake unless such lands are purchased or donated for such purposes.

An additional word or two concerning the Racine and Kenosha County lake coast might well be men-

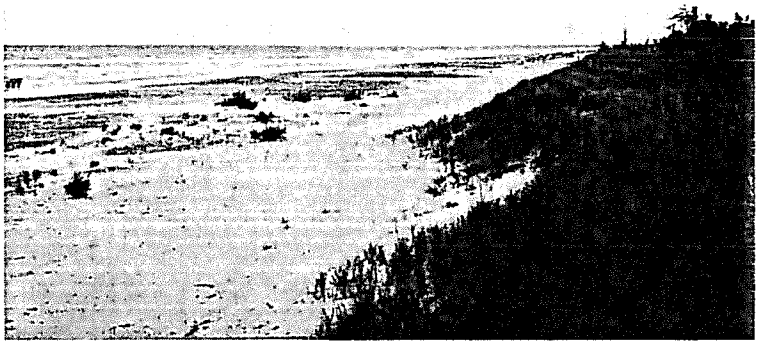


Plate XX. The coast of Lake Michigan offers excellent bathing opportunities. The glistening sand beaches and the cool invigorating water can be matched only by the seashore. The view of the pounding surf or of distant shipping on the horizon gives to Wisconsin an "ocean scene".—Sheboygan & Ozaukee Cos.

tioned. These areas are ideally located to serve the thousands of people who dwell within the Milwaukee district. From a Department of the Interior Memorandum for the press under date of December 13, 1935, comes the following quotation:

> "Need for conserving for the public the finer beaches along all coasts and the Great Lakes was emphasized by studies of the National Resources Board. Sixteen seashore recreational areas were studied and it is recommended that early action be taken to establish a system of National Beaches before all have passed into private lands or been too much sub-divided."

Beach property as close to metropolitan centers as these areas will soon be out of reach of public ownership unless steps are soon taken to commence acquisition. These areas will provide bathing facilities for thousands of metropolitan inhabitants whose city beaches at the present time are extremely congested.

3. *The Connecting Parkways*

Most of the major water courses in southeastern Wisconsin are included in this recreational plan as streams that are suggested for parkway development.

The object of the parkways along streams is to protect the natural beauty of our water courses, control pollution and prevent encroachment on the flood plain of the rivers by providing attractive potential residence sites bordering these scenic waterways.

Many of these streams and rivers rise in the Kettle Moraine; thus these parkways will serve as beautiful drives connecting the large cities with the Kettle Moraine Area.

In many places, existing public roads parallel the rivers, leaving long, narrow strips of land between road and stream, which because of their shape, are of little agricultural or residential value and should, therefore, be purchased at a low figure. At places along certain streams, town or county roads border so close to the river that the legal highway right of way includes the river bank.

If the public exercised its right over this land and if the counties availed themselves of recently enacted statutes, Section 59.97, of the 1935 Statutes, and adopt zoning ordinances establishing setback building lines along the parkway highways and also more particularly, enact zoning ordinances to "regulate, restrict and determine the areas along natural water courses, channels, streams and creeks, in which trades and industries and the location of buildings for specified purposes may be prohibited", the start of a parkway system is accomplished. The zoning will prevent further building in the proposed parkway area and at a later date, when purchase can be effected, only land, and not improvements, will have to be acquired.

It is not proposed that these parkways will be formal, landscaped developments similar to the boulevards and parkways that are becoming popular improvements in large American cities, but rather naturalistic drives along a native landscape.

It is suggested that the parkways include the natural flood plains of the rivers, thus preserving their native beauty. The Milwaukee River, when at high stage, quite regularly causes heavy damage in the Milwaukee metropolitan area. This is because the flood plain of the river which is periodically overflown is being used for residential uses which have, and are, encroaching on the river's flood plain. When such land is unoccupied, there is no damage; buildings on the flood plain are likely to be in trouble during every period of high water. Residential expansion can develop along a parkway boundary on high land just as readily as it will along the river bank where it cannot escape inundation. Such has been the case in Milwaukee County. Parkways such as proposed here, will furnish highly desirable residential areas that are not subject to high water damage.

The parkway roads, following the major bends and meanders of the stream, here and there giving the motorist a pleasing view of the water, should be low speed, low cost pleasure drives. The winding nature of these roads and the fact that during flood time, many miles may be under water, will tend to keep off heavy industrial traffic and reserve these parkways for pleasure seekers.

4. *Smaller Suitable Park Areas*

In this recreational plan for southeastern Wisconsin, certain other interesting and scenic lands of little or no agricultural value are also suggested as future recreational areas. These are considerably smaller than the suggested state parks and, no doubt, can be preserved for public use as county or town parks or forests.

Plate XXI. The recreational value of the Milwaukee River cannot be over-estimated. The suggested parkway along this river will preserve scenic views such as this and encourage residences to be built along the parkway boundaries.—Ozaukee Co.

Plate XXII. View along the suggested Fox River Parkway.—Racine Co.

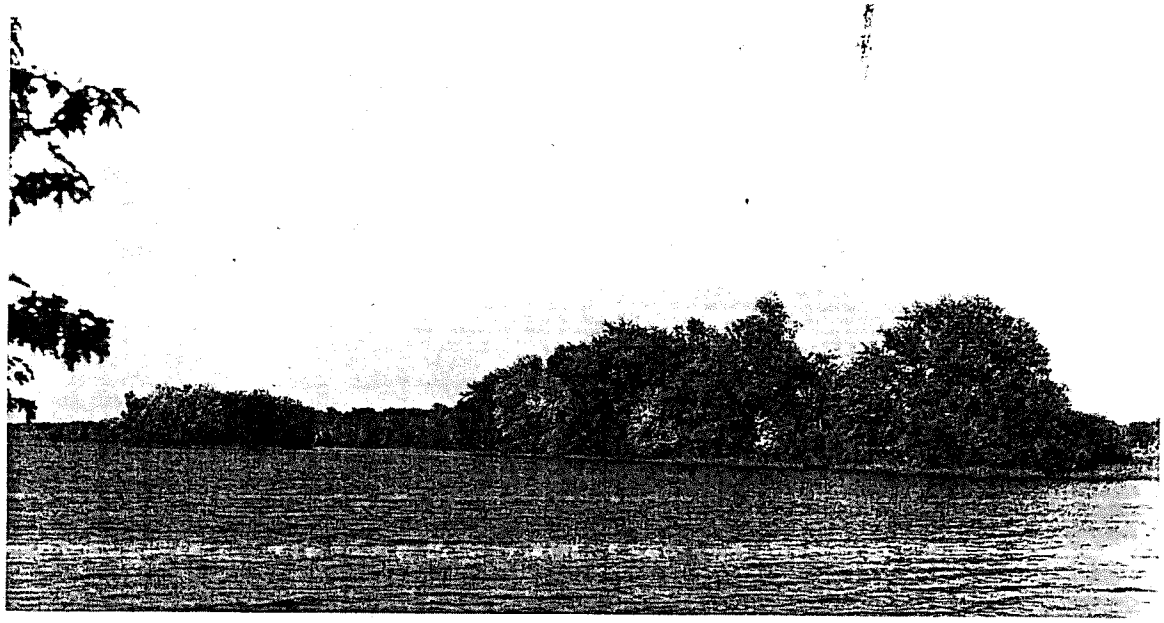


Plate XXIII. Scene along the suggested Rock River Parkway.—Jefferson Co.

Plate XXIV. Parkway Drives along streams connect the cities with the suggested park & forest areas. Rock River above Indianford.—Rock Co.

selected are located within easy reach of the dense population in the region. The areas suggested are large and are adaptable to all types of outdoor recreation, both in summer and winter. The areas are scenically beautiful and possess a landscape of unusual charm and interest. For the most part it is sub-marginal land, not adapted to intensive agricultural use, but well adapted to forestry and recreation.

Not only will this plan supply the recreational needs of southeastern Wisconsin, but the benefits derived from the resulting conservation of water and the restoration and perpetuation of forest cover and wild life will be far in excess of the cost.

Plate XXVI. Picnic Point, a unique finger of land extending into beautiful Lake Mendota, is proposed in the recreation plan as a county park because of its small size. As long ago as 1911, one of the nation's leading authorities on parks and recreational facilities recommended this feature for public ownership.—Dane Co.

ACKNOWLEDGMENTS

1. "Timber, Mine or Crop", U. S. Dept. of Agriculture Year Book, 1922.
2. "American Agriculture & the European Market"—E. G. Nourse.
3. "State Parks for Wisconsin"—John Nolen.
4. "Little Waters"—by H. S. Person and others; joint study for the Soil Conservation Service, Rural Resettlement Administration, and the Rural Electrification Administration.
5. "The Taxpayer Takes up Farming"—Fortune, March 1936, Volume 8, No. 3.
6. State of Wisconsin Exceutive Bulletin No. 3.
7. 1934 Wisconsin Regional Plan Report.
8. Report of the President's Committee on Wild Life Restoration, U. S. Dept. of Agriculture, 1934.
9. Department of the Interior, National Park Service Bulletins for the Press.
10. F. G. Wilson, Wisconsin Conservation Commission.
11. E. A. Howard, Supervising Engineer, Milwaukee Co. Regional Planning Department.
12. C. B. Whitnall, Milwaukee County Board of Land Commissioners.
13. John B. Bordner, Director, Economic Land Inventory.
14. Earl D. Hilburn, Economic Land Inventory.
15. Adolph Kanneberg, Chairman, Wis. Water Resources Committee.
16. Wisconsin Conservation Dept.—Photographs.
17. Works Progress Adm.—idem.
18. Milw. Co. Regional Planning Dept.—idem.

PROPOSED CONSERVATION AND RECREATION PLAN FOR SOUTHEASTERN WISCONSIN

WISCONSIN STATE PLANNING BOARD
NOVEMBER 1936

LEGEND

- AREAS CONTAINING LAND SUITABLE FOR STATE RECREATIONAL FORESTS OR STATE PARKS
- AREAS SUITABLE FOR COUNTY OR TOWN PARKS
- AREAS SUITABLE FOR WILD LIFE REFUGES
- WATER COURSES SUGGESTED FOR PARKWAY DEVELOPMENT
- CONNECTING HIGHWAYS SUGGESTED FOR PARKWAY DEVELOPMENT
- MORE IMPORTANT EXISTING PARKS
- INCORPORATED CITIES AND VILLAGES

SCALE - MILES
0 5 10

WINNEBAGO
CALUMET
MANITOWOC
GREEN
LAKE
FOND DU LAC
SHEBOYGAN
COLUMBIA
DODGE
WASHINGTON
OZAUKEE
DANE
JEFFERSON
WAUKESHA
MILW.
ROCK
RACINE
GREEN
WALWORTH
KENOSHA

THE KETTLE INTERLOBATE MORAINE

Lake Michigan

OSHKOSH, BERLIN, RIPON, GREEN LAKE, FOND DU LAC, WAUPUN, PORTAGE, BARABOO, BEAVER DAM, HORICON, WEST BEND, PORT WASHINGTON, COLUMBUS, WATERTOWN, MENOMONEE FALLS, WHITEFISH BAY, SHOREWOOD, MILWAUKEE, WAUKESHA, JEFFERSON, FORT ATKINSON, EDGERTON, WHITEWATER, JANESVILLE, ELKHORN, BURLINGTON, LAKE GENEVA, WALWORTH, BELOIT, MADISON, RACINE, KENOSHA, SOUTH MILWAUKEE, CUDAHY

Lake Winnebago, Fox River, Green Lake, Buttalo Lake, L. Puckaway, Grand River, Fond du Lac R., Sheboygan River, Mullet River, Long Lake, Kettle Moraine State Forest, Devils Lake Scenic Park, Baraboo River, Wisconsin River, Tower Hill Historical Park, New Glarus Woods Roadside Park, Terry Andrae Scenic Park, L. Mendota, L. Monona, Lake Koshkonong, Lake Kegonsa, Rock River, Bark River, Scuppernong River, Turtle Creek, Pike River, Root River, Milwaukee River, Menomonee River, Cedar Creek, Oconomowoc River, Fox River, Des Plaines River, Little Muskego Lake, Big Muskego Lake, Lake Beulah, Geneva Lake, Delavan Lake, Cushing Memorial Historical Park

PLATE II